

REMARKS

Applicants express appreciation to the Examiner for the interview held on Monday, April 14, 2003. Amendments made by this paper are consistent with the proposals discussed during the interview.

In the Office Action claims 1-7, 12, 15-19, 22-26, 29-30 and 33-37 were rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Patent No. 6,486,925 to Ko (hereinafter "Ko"). The remaining claims (8-11, 13-14, 20-21, 27-28 and 31-32) were rejected under 35 U.S.C. §103(a) as obvious over Ko in view of U.S. Patent No. 6,493,876 to DeFreese et al. (hereinafter "DeFreese").¹

By this paper, claims 23-32 and 38-51 are presented for reconsideration, and of these claims, claims 23, 40 and 52 are the independent claims at issue. Claim 23 is directed to a method of efficiently tuning to channels of a plurality of different broadcast types, claim 40 directed to a computer program product for implementing the method of corresponding claim 23, and claim 52 is directed to method of tuning into one or more digital broadcast streams that are broadcast over a digital channel.

As proposed at the interview, the method of claims 23 and 40 includes the storage of service records that contain tuning information that identifies at least a broadcast type and a channel. Additional tuning information is extracted from digital data streams broadcast to the tuning system. The additional tuning information includes at least one of a program number, a program identifier and a bit stream type, which can then be stored in the corresponding service records. The method also includes tuning to a selected channel with the tuning information and any additional tuning information in the corresponding service record of the selected channel, such that the tuning system can tune into a digital stream that is being broadcast over a selected channel without having to re-extract the additional tuning information from the stream that would otherwise be required to tune into the digital stream of the selected channel.

Storing the tuning information (e.g., broadcast type, channel Id) are useful for identifying the tuner to use for tuning into a selected channel. For example, as shown in Figure 2 of the application, the invention contemplates a tuning system that utilizes several dedicated tuners for

¹ Since both references qualify, if at all, as proper references under 35 U.S.C. § 102(e), applicants respectfully reserve the right to challenge the status of either or both references as "prior" art at any time that such may become necessary or appropriate in applicants' view. Accordingly, any argument in regard to the teachings of either reference is made merely *assuming arguendo* that the reference(s) are proper "prior" art.

tuning to selected channels of a variety of broadcast types, including analog and digital variations of radio, TV, cable and satellite.

Extracting and storing the additional tuning information, referred to in the claims, is also particularly useful for enabling the tuning system to efficiently and quickly tune to digital signals that require a multi-step operation, as described in the specification. In particular, as noted by applicants in their specification,

Acquisition of a digital television signal is a multi-step operation that can be significantly slow. For instance, once a tune request is received, the tuner first monitors the digital video stream in order to extract tuning information such as the program number or program identifier from the video stream. Once this necessary [additional] information is extracted, the tuner can finally tune to the desired channel. The initial step of extracting the necessary tuning information can take significant time. Thus, many consumers find that the channel changing across digital channels can be annoyingly slow process. ...

If the user changes channels frequently, the user may be inconvenienced by the constant delay between channel changes. This is why channel changes in conventional digital television devices are rather sluggish, especially when channel changes occur frequently.

(p. 4, ll. 18-24; p. 19, ll. 1-10). Accordingly, by storing the additional tuning information (program number, program identifier, or bit stream type) of a particular digital broadcast stream, the tuning system is enabled to use this additional tuning information to quickly and efficiently return to and tune into a particular digital stream of a selected channel, rather than having to re-extract the additional tuning information prior to completing the tuning in process.

New independent claim 52, is directed to this more specific embodiment for tuning into one or more digital broadcast streams. In particular, the claimed method includes extracting and using additional tuning information from the one or more digital data streams that corresponds specifically to the one or more digital data streams being broadcast over the one or more digital channels.

As noted during the interview, Ko and DeFecse do not anticipate or make obvious the claimed invention, either singly or in combination. For example, Ko is directed to a channel managing apparatus that assigns channel numbers to different channels depending on whether the broadcast channel corresponds to an analog, digital, cable or satellite broadcast. In particular,

channel numbers 1 thru L are assigned to analog broadcast channels, channels 1+L thru m are assigned to cable broadcast channels, channels m+1 thru n are assigned to digital channels, and channels n+1 thru O are assigned to satellite broadcast channels. (Table 1; col. 5, ll. 35-41.) This enables the tuning device to know what type of broadcast to tune to by a user's selection of a channel number. In particular, "if the input channel number exists between m+1 and n, it is recognized as a digital ground wave broadcasting channel." (col. 6, ll. 39-42). For the digital channels, the tuning frequency, the relay terminal and the network ID are also stored to enable the Ko channel managing apparatus to tune to the selected digital channels. (col. 5, ll. 3-5; Table 1).

As is evident from the foregoing, Ko does not teach storing the additional tuning information as claimed, corresponding to particular streams/programs that are broadcast over the digital channel.

DeFreese also fails in this respect. Indeed, DeFreese, is even more remote than Ko on this point,² and was only cited in the Office Action as a secondary reference in connection with certain of the dependent claims.

Accordingly, for at least the foregoing reasons, the applicants respectfully submit that the pending are neither anticipated nor made obvious by Ko and DeFreese, singly or in combination, or any other art or record. Indeed, as concluded in the Interview Summary, the "proposed amendments appear to read over [the] applied references/overcome the rejections of record." Accordingly, favorable reconsideration of the pending claims is respectfully requested.

In the event the Examiner finds any remaining impediment to allowance of this application that may be clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney.

² DeFreese is generally directed to a system and method for providing a full service cable television system. (Abstract).

Dated this 5th day of May, 2003.

Respectfully submitted,

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1. The first step in the process is to identify the problem or issue that needs to be addressed. This involves gathering information and understanding the context of the problem.

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